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ABSTRACT

A followup study was conducted to determine the number and percentage of former vocational agricultural students who left high schools in Virginia from 1954-1966 and who were engaged in farming and other occupations in 1967. Occupational records of 32,270 former students who had completed 1 or more years of vocational agriculture were secured from agricultural education teachers, and data were summarized and compared with a 1955 followup study by teacher education staff at Virginia Polytechnic Institute. Major implications include: (1) The proportion of ex-students who enter production farming will continue to decline, (2) The need for training to qualify workers for non-farm jobs in the agricultural industry has greatly increased, (3) More than one-third of those who study vocational agriculture 4 or more years make use of their training after they leave school, (4) Many were finding it difficult to become farm owners and were using farm employment as a "stepping stone" to other work, and (5) The training students received in vocational agriculture was excellent training for employment. (SB)

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OCCUPATIONAL STATUS OF FORMER STUDENTS of Vocational Agriculture in Virginia

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Foreword

Appreciation is expressed to Rufus W. Beamer, Head, Department of Education, and J. D. Oliver, Acting Head, Agricultural Education, who served as consultants and made helpful suggestions for designing and making the study and for preparing the report; to J. M. Campbell, State Supervisor of Agricultural Education; and to A. T. Adams, J. H. Copenhaver, W. R. Crabill, W. C. Dudley, J. C. Green, and J. A. Hardy, Area Supervisors of Agricultural Education, for sponsoring the study.

Special thanks are due the teachers in high school departments of agricultural education in Virginia who compiled and submitted the follow-up records of former students of vocational agriculture.* Data for the study were taken from these records.

Summary

Data for this study were taken from follow-up records compiled by teachers of agricultural education in high schools in Virginia. The occupational records for 32,270 former students of vocational agriculture were used.

Of former students of vocational agriculture in Virginia who were employed in civilian occupations in 1967, 15.08 percent were engaged in farming. This is more than twice the percentage (7.25) of the male civilian labor force in the United States engaged in farming in 1967.

More than one-fourth (26.95 percent) of the former students of vocational agriculture in Virginia who were gainfully employed (not including those in the armed forces) were farming or in related occupations in 1967. There was considerable variation among the counties in the number of such students who were farming or in related occupations.

More than one-third (35.11 percent) of the Virginia ex-students who studied vocational agriculture four or more years were farming and in occupations related to farming in 1967. Only 30 percent of all such students in the nation were in this category.

Ex-students of vocational agriculture tend to farm in the communities in which they are trained.

The proportion of ex-students of vocational agriculture engaged in occupations related to farming greatly increased between 1955 and 1967.

Sixteen percent of the former students of vocational agriculture in Virginia who were farming in 1955 obtained most of their income from non-agricultural work. Nearly twice this proportion (30.98 percent) were in this category in 1967.

Two-thirds of the ex-students in farming in 1955 had become established as owners or had definite partnership agreements with their fathers. This proportion had decreased to one-third in 1967.

The percentage of ex-students of vocational agriculture in farming has persistently declined. This decline during the past 30 years has been in practically the same proportion as the decline in farm operators in Virginia.

Many of the former students of vocational agriculture in Virginia have become outstanding leaders. Among these are: (1) the former and present Commissioner of Agriculture and Commerce, (2) the Executive Assistant to the Governor, and (3) a member of the Board of Visitors of Virginia's Land-Grant University.

Nearly twice the proportion of ex-students studying agriculture in college in 1955 were doing so in 1967. And, more than twice the proportion were in college, not studying agriculture, in 1967.

Only fifty-four hundredths of one percent of the former students of vocational agriculture in Virginia were unemployed in 1967.

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*The term "vocational agriculture" was used for many years after passage of the Smith-Hughes Act in 1917 to describe the vocational education in agriculture course offered in public high schools. In recent years, many educators have used the term "agricultural education" to describe this course. Because each of these terms was used to some extent during the years covered by the follow-up study of former students made in Virginia in 1968, the two are used interchangeably in this report.

One-sixth (16.61 percent) of the ex-students were in the armed forces in 1967.

Results of this study indicate:

1. **The proportion of ex-students of vocational agriculture who enter production farming will continue to decline.**

2. **Ex-students of vocational agriculture who farm tend to do so in the communities in which they are trained.**

3. **The need for training to qualify workers for non-farm jobs in the agricultural industry greatly increased in recent years.**

4. **A variation exists among counties in Virginia relative to the need for training for production farming and for occupations related to farming. The kind of vocational training provided in a particular county or community should be based upon the local needs and demands.**

5. **More than one-third of those who study vocational agriculture four or more years make intensive use of this training after they leave high school.**

6. **The proportion of former students of vocational agriculture engaged in non-agricultural work and supplementing their incomes by farming part-time has greatly increased in recent years and is likely to continue to increase.**

7. **Many ex-students of vocational agriculture who were farming in 1967 were finding it difficult to become farm owners or partners and were using farm employment as a "stepping stone" to other work.**

8. **The training students receive in vocational agriculture is excellent training for employment.**

A Study of the Occupational Status of Former Students of Vocational Agriculture who left High Schools in Virginia from 1954 Through 1966

B. C. Bass*

Introduction and Background

During the half-century (1917-1968) that vocational agriculture has been offered in public high schools, teachers, administrators, and teacher-educators in Virginia have been concerned about what those who receive instruction in this subject do after they leave high school. Because the ultimate value of knowledge and skills is largely determined by the extent they are used, agricultural education workers have been, and continue to be, concerned about the extent their students utilize the knowledge and skills acquired.

In order to provide needed information, most teachers of vocational agriculture have kept an occupational record of each former student. Prior to 1961, the form used throughout Virginia permitted a teacher to code on one line on a standard 8 1/2" x 11" page the occupational record of a former student each year for 12 years after the student left high school. In 1961, the form was revised to provide space for coding the occupational record for 15 years on one page.

Some individual teachers have summarized and analyzed the occupational records of their respective former students and utilized the results as bases for: (1) continuing, or revising as needed, the subject matter content of the vocational agriculture course of study; (2) requesting financial appropriations for their programs; (3) informing the public of the occupational successes of former students; and (4) recruiting students.

A state-wide summary and analysis of the occupational records compiled by teachers of vocational agriculture was first made in 1926. Similar studies were made to include the follow-up records through 1932, 1936, 1942, 1949, 1955 and 1966. The first four studies were made by graduate students. Since 1942 the scope of the problem has made it too great for students to undertake and the responsibility has been assumed by the staff of the teacher education department with the teachers and supervisory staff cooperating. In the study made to include records through 1955, the IBM system was used for the first time.

The Federal Vocational Education Act of 1963 requires that the program of vocational education in agriculture be evaluated at least every five years.[1] It was believed that an analysis of the occupational status of former Virginia vocational agriculture students would provide information which could be used to evaluate the effectiveness of this kind of education in this Commonwealth.

The occupations in which the former students were engaged in 1967 were expected to provide indications of the training needed by students in the future and serve as partial bases for planning instructional programs.

Purpose

The overall purpose was to determine the number and percentage of former vocational agriculture students, who left high schools in Virginia from 1954 through 1966, who were engaged in farming and other occupations in 1967.

More specifically, the purposes were to determine:

1. The number and percentage of the ex-students who were farming and their status in farming;
2. The extent ex-students who farmed did so in their home communities;
3. The number and percentage of ex-students who were working in occupations related to farming. (Examples: implement dealer or salesman, hatchery operator, Soil Conservation Service, etc.);

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[1]United States Congress, PUBLIC LAW 88-210 (Vocational Education Act of 1963), 88th Congress, H. R. 4955. December 18, 1963. Government Printing Office, Washington, D. C. 1963. p. 10.

4. The number and percentage of ex-students who were working in non-agricultural occupations and supplementing their incomes by farming;
5. The number and percentage of ex-students who were in non-agricultural occupations with no income from farming;
6. The number and percentage of ex-students who were:
   a. In special schools (Business College, Trade Schools, etc.),
   b. Studying agriculture in college; and
   c. In college, not studying agriculture; and
7. The number and percentage of ex-students who were:
   a. Unemployed,
   b. Deceased, and
   c. In the armed forces.

Scope

This study included the occupational record, as far as such record was available, for each former student who completed one or more years of vocational agriculture and left a high school in Virginia from 1954 through 1966. The follow-up records for 32,270 ex-students were included.

Procedure

Each of the five area supervisors of agricultural education in Virginia was asked to secure from the teachers in his area a copy of the occupational records for all former students who had the qualifications to be included in the study, and to send these records to the teacher education staff at Virginia Polytechnic Institute. This was done during the early part of 1968. The completeness and accuracy of the records rested primarily with the teachers who compiled the occupational records of their respective former students. Data taken from these records are presented and interpreted on this and the following pages.

FINDINGS

The data summarized in Table 1 reveals that more than one-fourth (26.95 percent) of the ex-students gainfully employed (not including those in the armed forces) were farming or in related occupations in 1967 and slightly less than three-fourths (73.05 percent) were in non-agricultural occupations. The findings of a previous follow-up study, which ended with 1955 records, disclosed that at that time one-third (32.60 percent) were farming or working in occupations related to farming, and two-thirds (63.46 percent) were in non-agricultural occupations. A small group, non specified in the report, made up the other 3.94 percent.[2]

It is significant that the Virginia ex-students who farmed did so in their home communities rather than in other communities, the ratio being approximately forty-seven to one.

Table 2 presents in greater detail the information contained in Table 1. It is the basic table of this report. Follow-up reports were made by Virginia teachers, prior to January 1, 1969, under the occupational classification in this table. The code numbers and letters on the left were used to designate the classification of each individual.

Of the 3,602 ex-students engaged in farming in 1967, nearly one-third (31.90 percent) either owned or were buying farms or had definite partnership agreements with their respective fathers.

Eight hundred and fifty-eight (23.82 percent of the 3,602 engaged in farming) were in partnership with their respective fathers. This way of becoming established in farming (becoming a farm owner) was being used by more of the ex-students than any other way.

The second largest group of the ex-students in farming consisted of 527 (14.63 percent of those farming) who were working for wages.

A total of 1,116 (30.98 percent of those in farming) had some farm income but their main source of income was non-agricultural work. These were part-time farmers. The percentage of the ex-students in this group increased from 16.07 in 1955[3] to 30.98 in 1967. This means that nearly twice the proportion of the ex-students that were part-time farmers in 1955 were so in 1967.

The number of farm operators in Virginia in 1964 (80,354) is 40.65 percent of the number of such operators in 1935 (197,632).[4] The percentage of former students of vocational agriculture who were farming in 1967 (15.08) is 39.27 percent of the proportion who were farming in 1936 (38.40).[5] In other words, the percentage of change in farm

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[2]H. W. Sanders, "A Follow-Up Study of Students of Vocational Agriculture in Virginia, 1918-1955." (14 pages mimeographed.) Department of Vocational Education, Virginia Polytechnic Institute, Blacksburg, 1959. p. 4.

[3]H. W. Sanders, "A Follow-Up Study of Students of Vocational Agriculture in Virginia, 1918-1955." (14 pages mimeographed.) Department of Vocational Education, Virginia Polytechnic Institute, Blacksburg. 1959. pp. 5 and 6.

[4]United States Bureau of the Census. 1950 (page 3) and 1964 (page 10) CENSUS OF AGRICULTURE. Government Printing Office, Washington, D. C.

[5]H. W. Sanders, "A Follow-Up Study of Students of Vocational Agriculture in Virginia, 1918-1955." (14 pages mimeographed.) Department of Vocational Education, Virginia Polytechnic Institute, Blacksburg. 1959. p. 3.

Table 1. Distribution in 1967 of Former Students of Vocational Agriculture Who Left High Schools in Virginia from 1954 through 1966

	Occupational Group	Number	Percent
1.	Farming in home community	3,527*	14.77
2.	Farming away from home community	75	0.31
3.	Total farming	3,602	15.08
4.	In occupations related to farming	2,835	11.87
5.	Total farming and in related occupations	6,437	26.95
6.	In non-agricultural occupations	17,451	73.05
7.	Total	23,888	100.00
8.	Not included above:		
	Code "12a" Deceased	369	
	Code "12aa" Died in armed forces	28	
	Code "12b" Incarcerated (jail, etc.)	48	
	Code "12c" Mentally or physically handicapped	57	
	Code "12d" Loafing, doing nothing	173	
	Code "13d" Moved out of community leaving no trace	1,023	
	Code "17" Still in high school	1,323	
	Code "18" In armed forces	5,361	
	Total		8,382
9.	Total included in the study		32,270

*Included were 1,116 whose main source of income was other than farming but who had some farm income. This group was 4.67 percent of 23,888.

operators in Virginia from 1935 to 1964 was practically the same as the percentage of change in the proportion of former students of vocational agriculture who were engaged in ~~farming~~ farming.

Table 3 was prepared to permit the reader to compare the proportion of the ex-students who were in each occupational classification in 1967 and when the previous follow-up study (ending in 1955) was made.

Of the former students in farming in 1967, nearly one-third (31.90 percent) had become established as owners or had definite partnership agreements with their fathers. This is much less than the two-thirds of the ex-students in this category who were farming in 1955.

It is significant that the proportion of ex-students studying agriculture in college in 1967 was nearly twice that reported studying agriculture in college in the previous study, which ended with 1965 records. And, more than twice the proportion were in college, not studying agriculture, in 1967.

Although determining the effectiveness of instruction in vocational agriculture as preparation for various occupations was not among the purposes of this study, it seems appropriate to mention that among the many ex-students who received training in this subject while in high school are the former and present State Commissioner of Agriculture and Commerce, the Executive Assistant to the Governor, and a member of the Board of Visitors of Virginia's Land-Grant University.

The proportion of the ex-students in the armed forces was relatively high (12.28 percent) in 1955. This was probably due more to mobilization for the Korean conflict than to voluntary military service. The percentage (16.61) was even higher in 1967 due to the war in Vietnam. The data imply that ex-students of vocational agriculture were

Table 2. Occupations in 1967 of 32,270 Former Students of Vocational Agriculture Who Left High Schools in Virginia From 1954 Through 1966

	Occupations	Number	Percent
In Community or County			
Farm Main Source of Income			
1	Own, or buying a farm	209	0.65
1a	Own, or buying a farm with supplemental income	82	0.25
2	Renting a farm	115	0.36
2a	Renting a farm with supplemental income	39	0.12
3	Partner with father, with definite business agreement	858	2.66
4	Working on home farm with allowance from father	322	1.00
5	Conducting own enterprises, from which income received	140	0.43
6	Working for wages on farm	527	1.63
7	Farm manager	25	0.08
8a	Partner in farming (not home farm) as owner	20	0.06
8b	Partner in farming (not home farm) as renter	23	0.07
8c	Partner in farming (not home farm) as share-cropper	51	0.16
Other Than Farm Main Source of Income			
9	Non-agricultural work & supplementing income by farming as:		
	9a Owner	257	0.80
	9b Renter	109	0.34
	9c Share-cropper	230	0.71
	9d Farm laborer	186	0.58
	9e Indefinite	334	1.03
10	In occupation related to farming in or near community	1,215	3.76
10a	In occupation related to farming in or near community with supplemental farm income	832	2.58
11	In non-agricultural occupation: no income from farm	9,666	29.96
12a	Deceased	369	1.14
12aa	Died in armed forces	28	0.09
12b	Incarcerated (jail, etc.)	48	0.15
12c	Mentally or physically handicapped	57	0.18
12d	Loafing, doing nothing	173	0.54
Out of Community or County			
13	Moved out of community or county:		
	13a With farming main source of income	75	0.23
	13b In non-agricultural occupation	6,430	19.92
	13c In occupation related to farming	479	1.48
	13d No trace	1,023	3.17
14	In special school (Business College, Trade School, etc.)	361	1.12
15	Studying agriculture in college	309	0.96
16	In college, not studying agriculture	994	3.08
17	Still in high school	1,323	4.10
18	In armed forces	5,361	16.61
	Total	32,270	100.00

Table 3. Proportion of Former Students of Vocational Agriculture in Virginia Who Were in Each Occupational Classification in 1955 and in 1967

Classifications		Percent 1955*	Percent 1967
In Community or County			
Farm Main Source of Income			
1	Own, or buying a farm	5.68	0.65
1a	Own, or buying a farm with supplemental income	0.93	0.25
2	Renting a farm	1.39	0.36
2a	Renting a farm with supplemental income	0.19	0.12
3	Partner with father, with definite business agreement	5.40	2.66
4	Working on home farm with allowance from father	1.16	1.00
5	Conducting own enterprises, from which income received	0.84	0.43
6	Working for wages on farm	1.27	1.63
7	Farm manager	0.23	0.08
8a	Partner in farming (not home farm) as owner	0.19	0.06
8b	Partner in farming (not home farm) as renter	0.13	0.07
8c	Partner in farming (not home farm) as share-cropper	0.24	0.16
Other Than Farm Main Source of Income			
9	Non-agricultural worker & supplementing income by farming:		
9a	As owner	1.42	0.80
9b	As renter	0.27	0.34
9c	As share-cropper	0.28	0.71
9d	As farm laborer	0.20	0.58
9e	Indefinite	0.79	1.03
10	In occupation related to farming in or near community	2.31	3.76
10a	In occupation related to farming in or near community with supplemental farm income	1.43	2.58
11	In non-agricultural occupation: no income from farm	23.06	29.96
12a	Deceased	2.37	1.14
12aa	Died in armed forces	0.87	0.09
12b	Incarcerated (jail, etc.)	0.11	0.15
12c	Mentally or physically handicapped	0.25	0.18
12d	Loafing (unemployed)	0.43	0.54
Out of Community or County			
13	Moved out of community or county:		
13a	With farming main source of income	1.01	0.23
13b	In non-agricultural occupation	22.96	19.92
13c	In occupation related to farming	1.59	1.48
13d	No trace	5.34	3.17
14	In special schools (Business College, Trade School, etc.)	0.38	1.12
15	Studying agriculture in college	0.56	0.96
16	In college, not studying agriculture	1.49	3.08
17	Still in high school	2.86	4.10
18	In armed forces	12.28	16.61
	Totals	99.91	100.00

*H. W. Sanders, "A Follow-Up Study of Students of Vocational Agriculture in Virginia, 1918-1955." (14 pages mimeographed.) Department of Vocational Education, Virginia Polytechnic Institute, Blacksburg. 1959. p. 6.

serving their country well. The finding that only nine-hundredths of one percent had died in the armed forces may indicate that they possessed high capability of self-defense.

Table 4 was prepared in an effort to determine the effect of the number of years of vocational agriculture on the choice of farming and related occupations. There was some but not a great difference in the effect one, two, or three years of vocational agriculture had on the ex-students' choice of both farming and related occupations. However, a much larger proportion of those who completed four or more years of vocational agriculture, than of those who received only one, two, or three years of training in this subject, entered farming or occupations related to farming.

The data in Table 5 were taken from the report of the follow-up study which ended with the 1955 records. The purpose of this table is to permit comparison of the data with similar 1967 data reported in Table 4. It is noteworthy that the proportion of the ex-students in farming decreased and the proportion working in occupations related to farming significantly increased between 1955 and 1967. The number of years the ex-students studied vocational agriculture while in high school had the same effects in 1967 that it had in 1955.

Table 6 was prepared to show the number of the ex-students who were in each of the occupational categories in 1967 in relation to the number of years of vocational agriculture completed while in high school. Although all of the conditions that determined the number of years the ex-students studied vocational agriculture are not known, the data indicate most of them felt sufficient need for agricultural information to devote four or more years to it. Consequently and in general, a larger number of those who studied vocational agriculture the maximum number of years permitted in high school (four years or more) entered each of the productive occupations. It is noteworthy that unemployment was five times more extensive among those who studied vocational agriculture only one year than among those who studied it four or more years. Likewise, departures from home communities without trace were five times more frequent among those who studied vocational agriculture one year than among those who studied it four or more.

In a related study, the U. S. Office of Education collected occupational information on 105,000 students who completed high school vocational agriculture in the United States in 1966.[6] Of these 105,000:

38	percent continued their education in colleges and in post-secondary vocational programs
30	percent entered agricultural occupations (farming and related occupations)
13	percent were in the armed forces
11	percent were in occupations not closely related to their vocational training
5	percent were unaccounted for
2	percent were employed part-time
1	percent were unemployed
100	

It may be seen in the previous paragraph that 38 percent of the students in the United States who completed high school vocational agriculture in 1966 continued their education in colleges and post-secondary vocational programs. It was not within the scope of the study made in Virginia to determine the proportion of ex-students of vocational agriculture who enrolled in post-secondary vocational programs. Therefore, no comparison can be made.

It is noteworthy that 30 percent of the students in the nation who completed high school vocational agriculture in 1966 entered agricultural occupations. An even higher percentage (35.11 percent) of the students in Virginia who had completed (4 years of) high school vocational agriculture were farming and in related occupations in 1967 (See Table 4). The percentage reported in this category in the report of the follow-up study of ex-vocational agriculture students in Virginia which ended with the 1955 records was 32.11 percent (See Table 5).

It is noteworthy that although 13 percent of the students included in the national study were in the armed forces, 16.61 percent of the ex-students of vocational agriculture in Virginia who completed one or more years of vocational agriculture were in the armed forces in 1967.

About one percent of the ex-students included in the national study were unemployed, whereas only about half this proportion (0.54 percent) of the Virginia ex-students of vocational agriculture were in this category (See Table 6).

The data in Table 7 were compiled primarily to determine the extent the ex-students who entered farming and related occupations after leaving high school were in these occupations two, four, six, eight, ten, and twelve years later.

The percentage of the former students who continued to farm in or out of their respective home communities, as well as those in occupations related to farming, slightly decreased from the time they left high school until ten years later but did not decrease between ten and twelve years after leaving high school.

[6]James Wall, "Facts You Should Know," NATIONAL VOCATIONAL AGRICULTURE TEACHERS ASSOCIATION NEWSLETTER, Vol. XI, No. 4 October, 1968. p. 3.

Table 4. Effect of Years of Vocational Agriculture on Choice of Farming and Related Occupations in 1967 by Ex-students Who Left High Schools in Virginia from 1954 through 1966

Years studied voc. agr.	Total number former students	Farming		In occupations related to farming		In farming and related occupations	
		Number	Percent	Number	Percent	Number	Percent
1	5,550	711	12.81	462	8.33	1,173	21.14
2	5,663	691	12.20	554	9.78	1,245	21.98
3	4,458	605	13.57	529	11.87	1,134	25.44
4 or more	8,217	1,595	19.41	1,290	15.70	2,885	35.11
Totals	23,888	3,602	15.08	2,835	11.87	6,437	26.95

Not included above:

369	ex-students deceased (Code 12a)
28	ex-students died in armed forces (Code 12aa)
48	ex-students incarcerated (Code 12b)
57	ex-students mentally or physically handicapped (Code 12c)
173	ex-students loafing (unemployed) (Code 12d)
1,023	ex-students moved out of community leaving no trace (Code 13d)
1,323	ex-students still in high school (Code 17)
5,361	ex-students in armed forces (Code 18)
8,382	total excluded from above calculations
32,270	total in the study

Table 5. Extent Former Students Who Studied Vocational Agriculture One, Two, Three, and Four Years and Who Left High Schools in Virginia from 1918 through 1955, Who Were Farming and in Occupations Related to Farming in 1955*

Years studied voc. agr.	Total number former students	Farming		In occupations related to farming		In farming and related occupations	
		Number	Percent	Number	Percent	Number	Percent
1	26,275	4,380	16.67	1,514	5.76	5,894	22.43
2	20,641	3,643	17.65	1,141	5.53	4,784	23.18
3	12,846	2,535	19.73	878	6.84	3,413	26.57
4	12,811	3,041	23.74	1,073	8.37	4,114	32.11
Totals	72,573	13,599		4,606		18,205	

*H. W. Sanders, "A Follow-Up Study of Students of Vocational Agriculture in Virginia, 1918-1955." (14-page mimeographed report.) Department of Vocational Education, Virginia Polytechnic Institute, Blacksburg. January, 1959. p. 8.

The percentage of those in non-farm occupations significantly increased each two years up to twelve years after leaving high school.

Very few, only one-fourth of the one percent, of the former students were farming out of their respective home communities four years after leaving high school. However, there was a gradual increase as years after leaving high school increased, although the proportion was still relatively small. It was 0.54 percent twelve years after leaving high school.

The percentage of the former students who were in occupations related to farming was relatively constant from two to twelve years after leaving high school. The lowest was 8.77 percent four years after leaving high school and the highest was 9.21 percent eight years after leaving high school.

As would be expected, the percentage who were deceased, ill, etc., increased slightly as years after leaving high school increased.

It is noteworthy that the percentage of the former students who were in the armed forces was highest two years after leaving high school, when one-fifth (20.59 percent) of them were in this occupational group, and gradually decreased as they became older. Only 8.15 percent remained in the armed forces twelve years after leaving high school.

By examining the data in Table 8, one can see that the percentage of former students of vocational agriculture engaged in farming has steadily and consistently declined during the past 40 years. The study made in 1926 revealed that 43.79 percent of the ex-students were farming at that time whereas the data compiled for this report disclosed that only 15.08 percent were so engaged in 1967.

Seven different follow-up studies of former students of vocational agriculture have been made in Virginia. Table 8 contains a very brief summary of these studies for comparison

It is noteworthy the percentage of former students of vocational agriculture in Virginia farming in 1967 was twice as large as the percentage of the male labor force farming in the United States. (The U. S. Department of Labor reported that in 1967 only 7.25 percent of the male labor force in the nation was engaged in farming.[7])

The report of the Virginia follow-up study, for which data were compiled through 1955, contains the following statement:

> There is no significant trend in the number of ex-students engaged in occupations related to farming. There does not seem to be a pressing need in Virginia for training youth for positions in occupations related to farming.[8]

This statement probably would not have been made in 1967. The percentage of ex-students engaged in occupations related to farming increased from 6.16 in 1955 to 11.87 in 1967.

Approximately one ex-student in seven (15.08 percent) was engaged in farming in 1967. In 1955 one in five of the white and one in seven of the Negro ex-students were so engaged.

A supplement (Table 9), attached, was prepared to show the extent the former students in each county in Virginia were in each occupational group, especially farming and related occupations, in 1967. It will be of interest primarily to those who wish to make comparisons and to determine the communities or counties in which the program of vocational agriculture seems to be most effective.

INTERPRETATIONS, CONCLUSIONS, AND IMPLICATIONS

1. Only 15.08 percent of the former students of vocational agriculture in Virginia who were employed in civilian occupations were engaged in farming in 1967. However, this is more than twice the percentage (7.25) of the male civilian labor force in the United States engaged in farming in 1967.

2. The proportion of the ex-students engaged in occupations related to farming greatly increased from 1955 to 1967. This, and the findings of another study,[9] reveal the need for training that will qualify individuals for employment in non-farm agricultural occupations. Therefore, it seems wise that several vocational agriculture options, (agricultural machinery service, agricultural supplies, conservation and forestry, and ornamental horticulture), besides production agriculture have been offered in a few high schools in Virginia in recent years. Courses in the options are designed to prepare students for non-farm work in specific areas of the agricultural industry.

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[7]United States Department of Labor. MANPOWER REPORT OF THE PRESIDENT. Government Printing Office, Washington, D. C. April, 1968. pp. 183 and 222.

[8]H. W. Sanders, "A Follow-Up Study of Students of Vocational Agriculture in Virginia, 1918-1955." (14 pages mimeographed.) Department of Vocational Education, Virginia Polytechnic Institute, Blacksburg. 1959. p. 3.

[9]B. C. Bass, "Educational Needs and Employment Opportunities in Non-Farm Agriculture." Bulletin 18, Research Division, Virginia Polytechnic Institute, Blacksburg. 1968. pp. 22 and 23.

Table 6. Occupations in 1967 of 32,270 Former Students of Vocational Agriculture Who Left High Schools in Virginia from 1954 through 1966 According to Number of Years of Vocational Agriculture Completed in High School.

		Years studied vocational agric.:				Total all groups	
		1	2	3	4 or more		
Code	Occupation	No.	No.	No.	No.	No.	%
1	Own, or buying a farm	19	35	27	128	209	0.65
1a	Own, or buying, sup. income	17	11	9	45	82	0.25
2	Renting a farm	13	30	18	54	115	0.36
2a	Renting with sup. income	11	9	8	11	39	0.12
3	Partner with father	111	123	137	487	858	2.66
4	Working on home farm with allowance from father	92	78	40	112	322	1.00
5	Own farm enterprises	25	27	45	43	140	0.43
6	Working for wages on farm	179	131	87	130	527	1.63
7	Farm manager	2	3	9	11	25	0.08
	Partner in farming as:						
8a	Owner	5	6	2	7	20	0.06
8b	Renter	2	7	5	9	23	0.07
8c	Share-cropper	17	17	8	9	51	0.16
	Non-agr. income supplemented by farming as:						
9a	Owner	28	38	44	147	257	0.80
9b	Renter	16	19	20	54	109	0.34
9c	Share-cropper	28	35	57	110	230	0.71
9d	Farm laborer	47	43	29	67	186	0.58
9e	Indefinite	71	66	48	149	334	1.03
10	Farm related work	238	255	214	508	1,215	3.76
10a	Farm related work supplemented with farm income	120	188	153	371	832	2.58
11	Non-agr. No farm income	2,550	2,398	1,703	3,015	9,666	29.96
12a	Misc: deceased	116	84	74	95	369	1.14
12aa	Misc: died in armed forces	4	5	6	13	28	0.09
12b	Misc: incarcerated	21	15	6	6	48	0.15
12c	Misc: ill (mental or phys.)	16	19	11	11	57	0.18
12d	Misc: loafing	97	41	17	18	173	0.54
	Moved out of community:						
13a	Farming main income	28	13	12	22	75	0.23
13b	Non-agricultural work	1,517	1,674	1,335	1,904	6,430	19.92
13c	Work related to farming	75	78	106	220	479	1.48
13d	No trace	511	280	134	98	1,023	3.17
14	In special schools	61	88	63	149	361	1.12
15	Studying agr. in college	29	33	56	191	309	0.96
16	In non-agr. college	249	258	223	264	994	3.08
17	Still in high school	667	362	135	159	1,323	4.10
18	In armed forces	1,060	1,266	1,134	1,901	5,361	16.61
	Totals	8,042	7,735	5,975	10,518	32,270	100.00

3. A considerable variation existed among counties in Virginia in the number of ex-students in farming and related occupations in 1967 (See Appendix). This indicates a similar variation exists in the need for training for production farming and for occupations related to farming. Therefore, each agricultural education teacher should determine the kinds of training needed in his school area and then plan his instructional program to provide, as far as possible, the training for which there is sufficient need and demand.

4. The proportion (35.11 percent) of the ex-students who completed four or more years of high school vocational agriculture in Virginia who were farming and in related occupations in 1967 was somewhat higher than the proportion (30 percent) of such students in the nation in this category. The proportion of similar ex-students found to be in this category in Virginia in 1955 was 32.11 percent. This was also higher than the percentage in this category in the nation in 1966. This indicates that about one-third of the students who studied vocational agriculture four years in high schools in Virginia were making intensive use of the training they received in this course.

5. Ex-students of vocational agriculture tend to farm in the communities in which they are trained. Therefore, the established practice of training in terms of local situations and needs should be continued.

6. Two-thirds of the ex-students in farming in 1955 had become established as owners or had definite partnership agreements with their fathers. This proportion had decreased to one-third in 1967. This may indicate that most of those in farming in 1967 were finding it difficult to become farm owners or partners and/or were using farm employment as a "stepping stone" to other work.

7. Nearly one-third (30.98 percent) of the ex-students in farming had some farm income but their main source of income was non-agricultural work. These were part-time farmers; the percentage of ex-students of vocational agriculture in Virginia in this category increased from 16.07 in 1955 to 30.98 in 1967. This may mean that an increasing number of farmers are finding it expedient to obtain some needed income by accepting off-farm employment while farming part-time.

8. A comparison of the findings of this study with results of former studies reveals that the percentage of ex-students engaged in farming is consistently declining. This decline during the past 30 years has been in practically the same proportion as the decline in farm operators in Virginia.

9. Although determining the effectiveness of instruction in vocational agriculture as preparation for various occupations was not among the purposes of this study, it seems appropriate to mention that among the many ex-students who received training in this subject while in high school were: (1) the former and present State Commissioner of Agriculture and Commerce, (2) the Executive Assistant to the Governor, and (3) a member of the Board of Visitors of Virginia's Land-Grant University. This, as well as the finding that only fifty-four hundredths of one percent of the ex-students were unemployed (doing nothing) in 1967, would seem to indicate that training in vocational agriculture does not hinder a person's success in any occupation and is excellent preparation for employment.

10. It is significant that nearly twice the proportion of the ex-students studying agriculture in college in 1955 were studying it in 1967. And, more than twice the proportion were in college, not studying agriculture, in 1967. This may indicate that studying vocational agriculture in high school does not hinder students in qualifying for college.

11. One-sixth (16.61 percent) of the ex-students were in the armed forces in 1967. This was 4.33 percent higher than in 1955 and discloses the very find contribution being made to the security of the nation. As only nine-hundredths of one percent had died in the armed forces, it appears that these young men may have possessed much self-defense skill.

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Wall, James, "Facts You Should Know," NATIONAL VOCATIONAL AGRICULTURE TEACHERS ASSOCIATION NEWSLETTER, Vol. XI, No. 4, October, 1968. p. 3.

Table 7. Percent of Former Students of Vocational Agriculture, Who Left High Schools in Virginia From 1954 through 1966, Who Were in Each Occupational Group Two, Four, Six, Eight, Ten and Twelve Years After Leaving High School.*

	Occupational Group	Years after leaving high school					
		Two	Four	Six	Eight	Ten	Twelve
1.	Farming in home community	16.39	14.30	13.01	11.89	11.77	11.95
2.	Farming away from home community	00.27	00.25	00.35	00.37	00.43	00.54
3.	Total farming	16.56	14.55	13.36	12.26	12.20	12.49
4.	In occupations related to farming	8.92	8.77	8.72	9.21	8.89	8.93
5.	Total farming and in related occupations	25.49	23.32	22.08	21.47	21.18	21.42
6.	In non-agricultural occupations	51.76	57.29	61.13	64.64	67.49	67.23
7.	Miscellaneous (deceased, ill & etc.)	2.16	2.06	2.20	2.46	3.01	3.20
8.	In armed forces	20.59	17.33	14.59	11.43	9.02	8.15
9.	Total	100.00	100.00	100.00	100.00	100.00	100.00

*Those whose occupations were unknown (13d) were not included.

Table 8. Summary of Follow-Up Study Results Based on Seven Studies Made in Virginia

Authors	Study up to	Scope	White - Percent			Negro - Percent		
			Farming	Rel. Occ.	Total	Farming	Rel. Occ.	Total
Kay, A. W.	1926	967	43.79	13.88	57.67	(Not included)		
Kline, J. M.	1932	9147	44.90	5.20	50.1	39.4	3.6	43.00
Richard & Wakeman	1936	11630	38.40	7.20	45.6	(Not included)		
McCann, W. H.	1942	14256	28.10	5.80	33.9	37.4	4.7	42.1
State Study I	1949	53952	25.206	6.614	31.82	18.302	4.677	22.979
State Study II	1955	76534	19.53	6.16	25.69	15.38	4.93	20.31

	Study up to	Scope	Percent – includes both White and Negro		
			Farming	Related Occupations	Total
State Study III	1967	32270	15.08*	11.87*	26.95*

*Omitted in calculating percent were:

Code "12a"	Deceased
Code "12aa"	Died in armed forces
Code "12b"	Incarcerated (jail, etc.)
Code "12c"	Mentally or physically handicapped
Code "12d"	Loafing, doing nothing
Code "13d"	Moved out of community leaving no trace
Code "17"	Still in high school
Code "18"	In armed forces

When all groups were included:

The percent farming in 1967 was 11.16
The percent in related occupations in 1967 was 8.79
Total 19.95

Table 9. Distribution in 1967, by Counties, of Former Students of Vocational Agriculture Who Left High Schools in Virginia from 1954 through 1966

1		2	3	4	Per cent		7	8	9	10	11	12
County*		Farming	Related occupations	Total columns 2 & 3	5 County	6 State	Non farming	Miscellaneous	Still in H.S.**	In armed forces	No trace	Total
Accomack	(3)	30	50	80	18.7	0.25	239	7	0	100	1	427
Albemarle	(3)	29	38	67	12.9	0.21	267	10	30	128	17	519
Amelia	(2)	44	38	82	18.7	0.25	247	10	7	80	12	438
Amherst	(2)	65	28	93	28.6	0.58	157	5	5	62	3	325
Appomattox	(2)	21	10	31	9.2	0.10	217	10	21	54	4	337
Augusta	(5)	172	74	246	25.0	0.76	531	31	15	137	24	984
Bath	(2)	17	29	46	20.9	0.14	120	4	9	41	0	220
Bedford	(2)	20	20	40	16.5	0.12	94	9	15	83	1	242
Bland	(1)	13	10	23	14.6	0.07	112	6	0	15	2	158
Botetourt	(2)	32	44	76	28.1	0.24	101	4	16	68	5	270
Brunswick	(2)	52	36	88	18.8	0.27	294	3	7	76	0	468
Buckingham	(2)	27	16	43	8.8	0.13	327	5	39	57	16	487
Campbell	(3)	56	17	73	21.0	0.23	162	1	31	70	10	347
Caroline	(3)	112	96	208	36.3	0.64	251	13	5	90	6	573
Carroll	(1)	34	13	47	16.6	0.15	182	6	21	19	8	283

*Number in parenthesis is number of high school departments of vocational agriculture included in the study.

**Individuals reported as "Still in high school" had returned after leaving with the exception of some who discontinued studying vocational agriculture but continued to attend high school.

Table 9. Distribution in 1967, by Counties, of Former Students of Vocational Agriculture Who Left High Schools in Virginia from 1954 through 1966 (Continued)

1 County*		2 Farming	3 Related occupations	4 Total columns 2 & 3	Per cent 5 County	Per cent 6 State	7 Non farming	8 Miscellaneous	9 Still in H.S.**	10 In armed forces	11 No trace	12 Total
Charles City	(1)	40	6	46	30.1	0.14	75	1	0	30	1	153
Charlotte	(1)	13	4	17	8.9	0.05	131	1	6	34	1	190
Chesapeake City	(1)	18	10	28	13.9	0.09	149	2	1	15	6	201
Clarke	(1)	48	14	62	29.5	0.19	93	4	18	29	4	210
Craig (No records)												
Culpeper	(2)	38	37	75	19.8	0.23	175	10	11	72	35	378
Cumberland	(1)	5	24	29	19.0	0.09	91	3	0	28	2	153
Dickenson	(2)	21	17	38	7.7	0.12	305	11	11	40	90	495
Dinwiddie	(2)	37	61	98	18.8	0.30	325	5	21	69	3	521
Essex	(1)	15	13	28	20.6	0.09	84	7	2	14	1	136
Fairfax	(1)	3	7	10	4.7	0.03	55	6	8	35	98	212
Fauquier	(2)	74	32	106	19.6	0.33	326	17	3	87	3	542
Floyd (No records)												
Fluvanna	(2)	12	35	47	14.7	0.15	199	3	5	52	13	319
Franklin City	(1)	9	13	22	22.9	0.07	42	0	9	22	1	96

*Number in parenthesis is number of high school departments of vocational agriculture included in the study.

**Individuals reported as "Still in high school" had returned after leaving with the exception of some who discontinued studying vocational agriculture but continued to attend high school.

Table 9. Distribution in 1967, by Counties, of Former Students of Vocational Agriculture Who Left High Schools in Virginia from 1954 through 1966 (Continued)

1		2	3	4	Per cent		7	8	9	10	11	12
County*		Farming	Related occupations	Total columns 2 & 3	5 County	6 State	Non farming	Miscellaneous	Still in H.S.**	In armed forces	No trace	Total
Franklin County	(1)	59	10	69	13.3	0.21	251	10	83	92	13	518
Frederick	(1)	34	44	78	16.4	0.24	277	6	6	97	13	477
Galax City (No records)												
Giles	(2)	29	12	41	14.5	0.13	149	13	17	53	9	282
Gloucester	(2)	8	7	15	5.8	0.05	191	4	2	45	2	259
Goochland	(2)	18	17	35	7.3	0.11	320	7	11	79	25	477
Grayson	(1)	35	37	72	39.1	0.22	76	5	2	26	3	184
Greene	(1)	13	2	15	9.4	0.05	114	3	3	24	0	159
Greenville	(2)	19	23	42	14.4	0.13	192	4	9	43	1	291
Halifax	(2)	234	244	478	43.2	1.48	370	21	31	156	50	1106
Hanover	(3)	59	101	160	23.3	0.50	305	22	59	104	36	686
Henry	(2)	73	27	100	18.1	0.31	296	11	19	119	9	554
Highland	(1)	15	2	17	12.5	0.05	84	5	0	25	5	136
Isle of Wight	(4)	55	140	195	34.7	0.60	239	24	4	95	5	562
King George	(1)	20	6	26	23.4	0.08	70	0	0	12	3	111

*Number in parenthesis is number of high school departments of vocational agriculture included in the study.

**Individuals reported as "Still in high school" had returned after leaving with the exception of some who discontinued studying vocational agriculture but continued to attend high school.

Table 9. Distribution in 1967, by Counties, of Former Students of Vocational Agriculture Who Left High Schools in Virginia from 1954 through 1966 (Continued)

1 County*		2 Farming	3 Related occupations	4 Total columns 2 & 3	Per cent 5 County	Per cent 6 State	7 Non farming	8 Miscellaneous	9 Still in H.S.**	10 In armed forces	11 No trace	12 Total
King & Queen	(2)	16	31	47	18.4	0.15	143	8	2	43	12	255
King William	(3)	63	65	128	35.8	0.40	158	1	0	61	10	358
Lancaster	(2)	12	31	43	14.8	0.13	175	11	2	56	4	291
Lee	(2)	79	91	170	44.0	0.53	113	8	1	73	21	386
Loudoun	(2)	64	20	84	17.6	0.26	242	4	46	56	46	478
Louisa	(2)	97	132	229	33.0	0.71	325	20	10	89	20	693
Lunenburg	(2)	52	64	116	21.8	0.36	298	7	10	99	2	532
Madison	(1)	55	11	66	23.4	0.20	144	4	27	37	4	282
Mathews	(2)	7	0	7	3.9	0.02	126	10	12	25	1	181
Mecklenburg	(4)	80	35	115	14 .5	0.36	468	10	21	121	59	794
Middlesex	(2)	17	8	25	10.6	0.08	137	4	0	69	0	235
Montgomery	(1)	18	12	30	25.2	0.09	72	1	0	16	0	119
Nansemond	(3)	26	93	119	14.7	0.37	438	5	2	184	59	807
Nelson	(1)	16	27	43	21.7	0.13	93	2	0	59	1	198
New Kent	(2)	4	9	13	14.3	0.04	39	0	6	29	4	91

*Number in parenthesis is number of high school departments of vocational agriculture included in the study.

**Individuals reported as "Still in high school" had returned after leaving with the exception of some who discontinued studying vocational agricultura but continued to attend high school.

Table 9. Distribution in 1967, by Counties, of Former Students of Vocational Agriculture Who Left High Schools in Virginia from 1954 through 1966 (Continued)

1 County*		2 Farming	3 Related occupations	4 Total columns 2 & 3	Per cent 5 County	Per cent 6 State	7 Non farming	8 Miscellaneous	9 Still in H.S.**	10 In armed forces	11 No trace	12 Total
Northampton	(2)	40	5	45	16.8	0.14	170	1	3	37	12	268
Northumberland	(1)	4	22	26	15.2	0.08	112	4	0	29	0	171
Nottoway	(3)	45	52	97	24.0	0.30	166	12	15	78	37	405
Orange	(1)	20	7	27	13.8	0.08	113	4	13	32	6	195
Page	(2)	57	23	80	28.0	0.25	110	14	13	68	1	286
Patrick	(2)	18	21	39	13.1	0.12	168	5	35	46	4	297
Pittsylvania	(9)	294	41	335	18.7	1.04	1008	42	97	301	13	1796
Powhatan	(2)	18	60	78	22.3	0.24	190	6	15	58	2	349
Prince Edward	(1)	6	0	6	5.9	0.02	79	1	9	7	0	102
Prince George (No records)												
Prince William	(2)	20	7	27	7.1	0.08	231	11	43	36	33	381
Pulaski	(1)	83	17	100	38.2	0.31	93	5	21	26	17	262
Rappahannock	(1)	9	5	14	7.3	0.04	149	7	7	15	0	192
Richmond	(2)	24	6	30	10.9	0.09	177	3	15	46	5	276
Rockbridge	(4)	43	25	68	15.5	0.21	259	8	49	47	8	439

*Number in parenthesis is number of high school departments of vocational agriculture included in the study.

**Individuals reported as "Still in high school" had returned after leaving with the exception of some who discontinued studying vocational agriculture but continued to attend high school.

Table 9. Distribution in 1967, by Counties, of Former Students of Vocational Agriculture Who Left High Schools in Virginia from 1954 through 1966 (Continued)

1 County*		2 Farming	3 Related occupations	4 Total columns 2 & 3	Per cent 5 County	Per cent 6 State	7 Non farming	8 Miscellaneous	9 Still in H.S.**	10 In armed forces	11 No trace	12 Total
Rockingham	(4)	163	162	325	25.8	1.01	611	22	125	168	9	1260
Russell	(1)	20	9	29	13.6	0.09	129	8	12	35	0	213
Scott	(2)	29	12	41	19.1	0.13	115	5	16	38	0	215
Shenandoah	(3)	51	65	116	14.1	0.36	537	21	3	140	8	825
Smyth	(4)	87	29	116	17.2	0.36	372	21	54	93	17	673
Southampton (No records)												
Spotsylvania	(2)	20	17	37	6.7	0.11	361	15	10	106	27	556
Stafford	(1)	9	8	17	11.1	0.05	93	5	11	23	4	153
Surry	(1)	11	9	20	15.9	0.06	69	4	0	32	1	126
Sussex	(1)	8	8	16	18.4	0.05	55	2	5	9	0	87
Tazewell (No records)												
Virginia Beach City	(2)	32	19	51	15.5	0.16	177	3	2	88	9	330
Washington	(2)	35	11	46	20.7	0.14	124	9	1	40	2	222
Westmoreland	(2)	38	46	84	20.0	0.26	245	7	0	80	4	420
Wythe	(3)	84	56	140	23.9	0.43	282	6	48	89	20	585
TOTALS		3,602	2,835	6,437		19.95	17,451	675	1,323	5,361	1,023	32,270

*Number in parenthesis is number of high school departments of vocational agriculture included in the study.

**Individuals reported as "Still in high school" had returned after leaving with the exception of some who discontinued studying vocational agriculture but continued to attend high school.

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